AMENDMENTS TO THE CLAIMS

1.   (Currently amended) A method of compensating mask/reticle data for lithographic process distortions, comprising the acts of:

reading a [[first]] set of mask/reticle data that defines at least one feature to be created lithographically;

performing a simulation of the etch effects that would occur if a wafer is created using a mask/reticle corresponding to the [[first]] set of mask/reticle data;

using the results of the etch simulation to ~~create a second~~ compensate features within the set of mask/reticle data ~~that defines at least one new or modified feature to be created lithographically~~ for etch distortions that would occur during lithographic processing; and

performing optical process correction (OPC) to compensate for optical/resist process distortions using the ~~second~~ etch compensated set of mask/reticle data as an input ~~to create a third set of mask/reticle data~~.

2.   (Currently amended) The method of Claim 1, comprising the additional act of exporting the [[third]] OPC compensated set of mask/reticle data to a mask/reticle writer to manufacture a corresponding mask/reticle.

3.   (Previously presented) The method of Claim 1, in which the act of performing a simulation includes accessing a set of predetermined rules for the etch process.

4.   (Previously presented) The method of Claim 1, in which the act of performing a simulation includes accessing a table of predetermined values for the etch process.

5.   (Currently amended) A method of compensating mask/reticle data for lithographic process distortions, comprising the acts of:

reading a [[first]] set of mask/reticle data that defines at least one feature to be created lithographically;

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performing a simulation of the etch effects that would occur if a wafer is created using a mask/reticle corresponding to the [[first]] set of mask/reticle data;

calculating etch biases from the etch simulation result; and

applying the previously calculated etch biases within [[an]] a model-based optical process correction (OPC) loop that adjusts the mask/reticle data for optical/resist process distortions.

6.   (Previously presented) The method of Claim 5, in which the act of performing a simulation includes accessing a set of predetermined rules for the etch process.

7.   (Previously presented) The method of Claim 5, in which the act of performing a simulation includes accessing a table of predetermined values for the etch process.

8.   (Currently amended) A computer-readable media having a sequence of programmed instructions stored thereon that when executed by a computer causes the computer to perform the acts of:

reading a [[first]] set of mask/reticle data that defines at least one feature to be created lithographically;

performing a simulation of the etch effects that would occur if a wafer is created using a mask/reticle corresponding to the [[first]] set of mask/reticle data ~~and~~:

using the results of the etch simulation to compensate features within the ~~create a second~~ set of mask/reticle data ~~that defines at least one new or modified feature to be created lithographically~~ for etch distortions that would occur during lithographic processing; and

performing optical process correction (OPC) to compensate for optical/resist process distortions using the etch compensated ~~on the second~~ set of mask/reticle data as an input.

9.   (Previously presented) The computer-readable media of Claim 8, wherein the sequence of programmed instructions causes the computer to export OPC corrected mask/reticle data to a mask/reticle writer to manufacture a corresponding mask/reticle.

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10. (Previously presented) The computer readable media of Claim 8, in which the act of performing a simulation includes accessing a set of predetermined rules for the etch process.

11. (Previously presented) The computer readable media of Claim 8, in which the act of performing a simulation includes accessing a table of predetermined values for the etch process.

12. (Currently amended) A computer readable media having a sequence of programmed instructions stored thereon that when executed by a computer causes the computer to perform the acts of:

reading a [[first]] set of mask/reticle data that defines at least one feature to be created lithographically;

performing a simulation of etch effects that would occur if a wafer is created with a mask/reticle corresponding to the [[first]] set of mask/reticle data;

calculating etch biases from the etch simulation; and

applying the previously calculated etch biases in ~~an~~ a model-based optical process correction (OPC) loop that adjusts the mask/reticle data for optical/resist process distortions.

13. (Previously presented) The computer readable media of Claim 12, in which the act of performing a simulation includes accessing a set of predetermined rules for the etch process.

14. (Previously presented) The computer readable media of Claim 12, in which the act of performing a simulation includes accessing a table of predetermined values for the etch process.

15 - 19 (Cancelled)

20. (Currently amended) A device that is formed on a wafer created by the acts of:

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reading a [[first]] set of mask/reticle data that defines at least one feature to be created lithographically;

performing a simulation of the etch effects that would occur if a wafer is created using a mask/reticle corresponding to the [[first]] set of mask/reticle data;

using the results of the etch simulation to compensate features within the ~~create a second~~ set of mask/reticle data ~~that defines at least one new or modified feature to be created lithographically~~ for etch distortions that would occur during lithographic processing;

performing optical process correction (OPC) to compensate for optical/resist process distortions using the ~~second~~ etch compensated set of mask/reticle data as an input ~~to create a third set of mask/reticle data~~;

exporting the [[third]] OPC corrected set of mask/reticle data to a mask/reticle writer to manufacture a corresponding mask/reticle; and

using the mask/reticle to create the device on the wafer.

21.   (Previously presented) The device of Claim 20, in which the act of performing a simulation includes accessing a set of predetermined rules for the etch process.

22.   (Previously presented) The device of Claim 20, in which the act of performing a simulation includes accessing a table of predetermined values for the etch process.

23.   (Currently amended) A device that is formed on a wafer created by the acts of:

reading a [[first]] set of mask/reticle data that defines at least one feature to be created lithographically;

performing a simulation of the etch effects that would occur if a wafer is created using a mask/reticle corresponding to the [[first]] set of mask/reticle data;

calculating etch biases from the etch simulation result;

applying the previously calculated etch biases within [[an]] a model-based optical process correction (OPC) loop that adjusts the mask/reticle data for optical/resist process distortions;

exporting the adjusted mask/reticle data to a mask/reticle writer to create a corresponding mask/reticle; and

using the mask/reticle to create the device on a wafer.

24.   (Previously presented) The device of Claim 23, in which the act of performing a simulation includes accessing a set of predetermined rules for the etch process.

25.   (Previously presented) The device of Claim 23, in which the act of performing a simulation includes accessing a table of predetermined values for the etch process.